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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,743	12/31/2003	Andrew J. Polcha	IQB-0022 (2203.0022C)	2727
27896 7590 09/28/2007 EDELL, SHAPIRO & FINNAN, LLC 1901 RESEARCH BOULEVARD SUITE 400 ROCKVILLE, MD 20850			EXAMINER LEMMMA, SAMSON B	
			ART UNIT 2132	PAPER NUMBER
			MAIL DATE 09/28/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/748,743

Applicant(s)

POLCHA ET AL.

Examiner

Samson B. Lemma

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 01/16/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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DETAILED ACTION

1. **Claims 1-33** have been examined.

Priority

2. This application claims priority of a provisional application No. 60/436,996 filed on 12/31/2002. Therefore, the effective filing data for the subject matter defined in the pending claims of this application is **12/31/2002**.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1-33** are rejected under 35 U.S.C. 102(e) as being anticipated by **Scott et al** (hereinafter referred as **Scott**) (U.S. Patent No. 6,720,712 B2) (filed on March 23, 2001)

Examiner has pointed out particular references contained in the prior arts of record in the body of this action for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. Applicant should consider the entire prior art as applicable as to the limitations of the claims. It is respectfully

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requested from the applicant, in preparing the response, to consider fully the entire references as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior arts or disclosed by the examiner.

5. **As per independent claims 1, 19 and 33 Scott discloses an access control system** [Column 2, lines 36-37, column 2, lines 42-43, column 17, lines 59-62 and column 18, lines 14-22, column 19, lines 61-63](For instance on column 2, lines 42-43, the following has been disclosed. "It is another feature of the invention that embodiments can be used to **control and/or restrict access**", and furthermore, on column 18, lines 14-22, the following has been disclosed. " FIG. 37 illustrates other applications for which the wireless transceiver biometric device 3400 is well suited. For example, device 3400 can be used for: building **access control**; law enforcement; electronic commerce; financial transaction security; tracking employee time and attendance; **controlling access** to legal, personnel, and/or medical records; transportation security; e-mail signatures; controlling use of credit cards and ATM cards; file security; computer network security; alarm **control**; and identification, recognition, and verification of individuals") **column comprising:**

A surface acoustic wave sensor which outputs a signal indicative of a distorted print. [Column 13, lines 60-67 and column 14, lines 8-10, figure 31, ref. Num "3108") (For instance on column 13, lines 60-67, the following has been disclosed. "an input signal is about ten-cycles long. These input signal causes the elements of the array to vibrate and produce sonic waves. These sonic waves can travel from an element through the shield layer to a fingerprint ridge 1704 above the element. These sonic waves can pass into a fingerprint ridge 1704 because the acoustic impedance of the shield layer is matched to the acoustic impedance of finger 1702. No acoustic barrier to the sonic

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waves is formed by the interface between a fingerprint ridge 1704 and the shield layer."

And on column 14, lines 8-10, the following has been disclosed. "After a number of cycles, the voltages of output signals obtained for the array are determined and processed to obtain the fingerprint of finger 1702."); and

a processor which compares the distorted print signal to one or more identity patterns and controls access to a restricted item based on results of said comparison [Column 17, lines 53-62, column 18, lines 14-22 and figure 31] (On column 17, lines 53-62, the following has been disclosed. "FIG. 36 illustrates using the wireless transceiver biometric device 3400 to complete an electronic sales transaction. In step 1 of the transaction, device 3400 is used to obtain a fingerprint of the individual wanting to make a purchase. Device 3400 then transmits the fingerprint to a device coupled to cash register 3602 (step 2), which sends the fingerprint to a third party verification service 3604 (step 3). The third party verification service uses the received fingerprint to verify the identity of the purchaser (step 4) **by matching/comparing the received fingerprint to fingerprint data stored in a database.**" Furthermore, on column 18, lines 14-22, the following has been disclosed. " FIG. 37 illustrates other applications for which the wireless transceiver biometric device 3400 is well suited. For example, device 3400 can be used for: building **access control**; law enforcement; electronic commerce; financial transaction security; tracking employee time and attendance; **controlling access** to legal, personnel, and/or medical records; transportation security; e-mail signatures; controlling use of credit cards and ATM cards; file security; computer network security; alarm **control**; and identification, recognition, and **verification of individuals**")

6. As per dependent claims 2-4, 14 and 20-21 Scott discloses an access control system/method as applied to claims above. Furthermore Scott discloses the system /method, wherein the sensor outputs the distorted print signal using a modifier. [Column 13, lines 60-67 and column 14, lines 8-10, See figure 31] (For instance

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on column 13, lines 60-67, the following has been disclosed. "an input signal is about ten-cycles long. These input signal causes the elements of the array to vibrate and produce sonic waves. These sonic waves can travel from an element through the shield layer to a fingerprint ridge 1704 above the element. These sonic waves can pass into a fingerprint ridge 1704 because the acoustic impedance of the shield layer is matched to the acoustic impedance of finger 1702. No acoustic barrier to the sonic waves is formed by the interface between a fingerprint ridge 1704 and the shield layer." And on column 14, lines 8-10, the following has been disclosed. "After a number of cycles, the voltages of output signals obtained for the array are determined and processed to obtain the fingerprint of finger 1702.")

7. As per dependent claims 5-6 and 22-23 Scott discloses an access control system/method as applied to claims above. Furthermore Scott discloses the system/method, wherein the modifier is a frequency of an excitation signal input into the sensor. [Column 12, lines 31-46 and figure 19 & figure 31] (the following has been disclosed on column 12, lines 31-46, "FIG. 19 illustrates the impedance of a single piezo ceramic element 200 loaded by a fingerprint valley 1706 according to an embodiment of the invention. At a frequency of about 19.8 MHz, the impedance of an element 200 loaded by a fingerprint valley is approximately 800 ohms. At a frequency of 20.2 MHz, the impedance is approximately 80,000 ohms. At a frequency of 20 MHz, the impedance is approximately 40,000 ohms. As can be seen when FIG. 19 is compared to FIG. 20, both the absolute impedance of an element 200 loaded with a fingerprint valley and the change in impedance with frequency of an element 200 loaded with a fingerprint valley is significantly different from that of an element 200 loaded with a fingerprint ridge. **This difference can be used to obtain an output from sensor array 1220 that can be processed by output signal processor 1240 to produce fingerprint data.**")

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8. As per dependent claims 7-9 and 24-26 Scott discloses an access control system/method as applied to claims above. Furthermore Scott discloses the system/method, wherein the modifier is a mask pattern coupled to the sensor and, wherein the mask pattern is included on a film placed over a print detecting surface of the sensor, furthermore, the mask pattern includes one or more projections which deform a piezoelectric material in the sensor. [Abstract and column 5, lines 5-15, column 2, lines 1-7 and figure 31] *(On abstract the following has been disclosed. "An identification device having a piezoelectric sensor array is used to obtain biometric data. Multiplexers are switched to control the sensor. The device has several operating modes for obtaining a variety of biometric data, including an impedance detection mode, a voltage detection mode, an imaging mode, and a Doppler-shift detection mode. The presence of a fingerprint on the sensor can be used to turn-on the device. The device is capable of capturing a fingerprint, forming a three-dimensional map of a finger bone, and/or determining the direction and speed of arteriole and/or capillary blood flow in a finger. A single pixel or a group of pixels can be detected and readout to a memory. The device can be used as an electronic signature device. The device can operate as part of a personal area network, using a public service layer according to the invention." And furthermore, on column 5, lines 5-15, the following has been disclosed. "Sensor 110 is preferably an array of piezo ceramic elements. For example, sensor 110 can comprise an array of polycrystalline ceramic elements that are chemically inert and immune to moisture and other atmospheric conditions. Polycrystalline ceramics can be manufactured to have specific desired physical, chemical, and/or piezoelectric characteristics. Sensor 110 is not limited to comprising an array of piezo ceramic elements, however. Sensor 110 can comprise, for example, a piezoelectric film. A polarized fluoropolymer film, such as, polyvinylidene flouride (PVDF) film or its copolymers can be used."*)

9. As per dependent claims 10-12 and 27-29 Scott discloses an access control system/method as applied to claims above. Furthermore Scott discloses the

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system/method, wherein the mask pattern is formed on a piezoelectric layer of the sensor.[Column 6, lines 20-34 and column 6, lines 35-53, column 2, lines 1-7, see also figure 31] (On column 6, lines 20-34, the following has been disclosed. "FIG. 7A illustrates a **sensor array 700 comprising rectangular piezo ceramic elements** according to a preferred embodiment of the invention. **Sensor array 700 is a multi-layer structure that includes a two-dimensional array of rectangular piezo ceramic elements 200**, similar to array 400. Conductors (such as conductors 706 and 708) are connected to each of the rectangular piezo ceramic elements 200. The conductors connected to one end of each element 200 (e.g., conductor 706) are oriented orthogonal with respect to the conductors connected to another end of each element 200 (e.g., conductor 708). A shield layer 702 can be added to one side to provide a protective coating where a finger can be placed proximate to sensor array 700. A support 704 can be attached to the opposite end of the sensor array. Sensor array 700 is described in more detail below." Furthermore on column 6, lines 35-53, the following has been disclosed. "FIG. 7B illustrates a sensor array 750 comprising **piezoelectric film (piezo film)** according to an embodiment of the invention. FIG. 7B is a cross-sectional view of sensor array 750. Sensor array 750 is a **multi-layer structure that includes a piezoelectric layer 752** sandwiched by two conductor grids 754 and 756. Conductor grids 754 and 756 each consist of rows of parallel electrically conductive lines. Preferably, the lines of grid 754 are oriented orthogonal with respect to the lines of grid 756 (that is, in x and y directions, respectively). This orientation creates a plurality of individually addressable regions or elements in the piezo film. As used herein, the term element refers to any region of a sensor array that can be addressed, either individually or as part of a larger region, using the rows of parallel electrically conductive lines (conductors). Piezoelectric polymer film sensors are further described in Piezo Film Sensors: Technical Manual, available from Measurement Specialities, Inc. Norristown, Pa., Apr. 2, 1999 REVB (incorporated by reference herein in its entire").

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10. As per dependent claims 13 and 30 Scott discloses an access control system/method as applied to claims above. Furthermore Scott discloses the system/method, wherein the print is one of a fingerprint, thumb print, or palm print. [Column 2, lines 1-7 and figure 31] *(On column 2, lines 1-7, the following has been disclosed. "The invention provides a device, system, and method for obtaining biometric data from a biological object. In accordance with the invention, a biological object (e.g., a finger or hand) is placed proximate to a piezoelectric sensor, and the sensor is operated to obtain an output. This output is then processed to produce the biometric data")*

11. As per dependent claims 15 and 31-32 Scott discloses an access control system/method as applied to claims above. Furthermore Scott discloses the system/method, further comprising: a controller which changes the modifier, wherein the surface acoustic wave sensor outputs a new signal indicative of a distorted print using the changed modifier and the processor compares the new distorted print signal to one or more identity patterns and controls access to a restricted item based on results of said comparison. [Column 13, lines 60-67 and column 14, lines 8-10 and column 17, lines 53-62 and column 18, lines 14-22] *(For instance on column 13, lines 60-67, the following has been disclosed. "an input signal is about ten-cycles long. These input signal causes the elements of the array to **vibrate and produce sonic waves**. These sonic waves can travel from an element through the shield layer to a fingerprint ridge 1704 above the element. **These sonic waves can pass into a fingerprint ridge 1704 because the acoustic impedance of the shield layer is matched to the acoustic impedance of finger 1702**. No acoustic barrier to the sonic waves is formed by the interface between a fingerprint ridge 1704 and the shield layer." And on column 14, lines 8-10, the following has been disclosed. "After a number of cycles, the voltages of output signals obtained for the array are determined and processed to obtain the fingerprint of finger 1702." And On column 17, lines 53-62, the following has been disclosed. "FIG. 36 illustrates using the wireless transceiver biometric device 3400*

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to complete an electronic sales transaction. In step 1 of the transaction, device 3400 is used to obtain a fingerprint of the individual wanting to make a purchase. Device 3400 then transmits the fingerprint to a device coupled to cash register 3602 (step 2), which sends the fingerprint to a third party verification service 3604 (step 3). The third party verification service uses the received fingerprint to verify the identity of the purchaser (step 4) **by matching/comparing the received fingerprint to fingerprint data stored in a database.**" Furthermore, on column 18, lines 14-22, the following has been disclosed. " FIG. 37 illustrates other applications for which the wireless transceiver biometric device 3400 is well suited. For example, device 3400 can be used for: building access control; law enforcement; electronic commerce; financial transaction security; tracking employee time and attendance; **controlling access** to legal, personnel, and/or medical records; transportation security; e-mail signatures; controlling use of credit cards and ATM cards; file security; computer network security; alarm control; and identification, recognition, and **verification of individuals**")

12. As per dependent claims 16 Scott discloses an access control system/method as applied to claims above. Furthermore Scott discloses the system/method, wherein the restricted item is one of an object or place. [Column 18, lines 14-22 and figure 37] (On column 18, lines 14-22, and figure 37, the following has been disclosed. " FIG. 37 illustrates other applications for which the wireless transceiver biometric device 3400 is well suited. For example, device 3400 can be used for: **building access control**; law enforcement; electronic commerce; financial transaction security; tracking employee time and attendance; **controlling access** to legal, personnel, and/or **medical records**; transportation security; e-mail signatures; controlling use of credit cards and ATM cards; file security; computer network security; alarm control; and identification, recognition, and **verification of individuals**")

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13. As per dependent claims 17 Scott discloses an access control system/method as applied to claims above. Furthermore Scott discloses the system/method, wherein the object includes a computing system. [Column 18, lines 14-22 and figure 37] *(On column 18, lines 14-22, and figure 37, the following has been disclosed. " FIG. 37 illustrates other applications for which the wireless transceiver biometric device 3400 is well suited. For example, device 3400 can be used for: building access control; law enforcement; **electronic commerce**; financial transaction security; tracking employee time and attendance; **controlling access** to legal, personnel, and/or medical records; transportation security; e-mail signatures; controlling use of credit cards and ATM cards; file security; computer network security; alarm control; and identification, recognition, and **verification of individuals**")*

14. As per dependent claims 18 Scott discloses an access control system/method as applied to claims above. Furthermore Scott discloses the system/method, wherein the place includes a room or building. [Column 18, lines 14-22 and figure 37] *(On column 18, lines 14-22, and figure 37, the following has been disclosed. " FIG. 37 illustrates other applications for which the wireless transceiver biometric device 3400 is well suited. For example, device 3400 can be used for: **building access control**; **law enforcement**; electronic commerce; financial transaction security; tracking employee time and attendance; **controlling access** to legal, personnel, and/or medical records; transportation security; e-mail signatures; controlling use of credit cards and ATM cards; file security; computer network security; alarm control; and identification, recognition, and **verification of individuals**")*

Conclusion

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15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. (See also PTO-Form 892).

A. U.S Publication No. 2003/0173408 discloses an enhanced identification appliance, such as a wristband, bracelet, patch, headband, neckband, ankleband, legband, card, sticker, or other wearable appliance, may have a biometric sensor, chemical sensor, optical sensor, heat sensor, pressure sensor, humidity sensor, electromagnetic sensor, acoustic sensor, various opto-electronics and/or various security features such as tamper-evident and tamper-resistant features. The sensors may obtain information about the wearer such as a fingerprint, retina, iris, blood, DNA, genetic data, voice pattern, temperature and other characteristic.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samson B Lemma whose telephone number is 571-272-3806. The examiner can normally be reached on Monday-Friday (8:00 am---4: 30 pm).

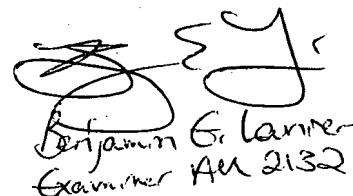
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BARRON JR GILBERTO can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 703-873-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SAMSON LEMMA
S.L.
09/10/2007


Benjamin G. Lerner
Examiner AU 2132